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ABSTRACT

The cornerstone of online career guidance systems rests with their degrees of durability, functionality, usability, and applicability over time and across a broad array of career options and scenarios. Students, counselors, employers, employees, and other prospective users must ascertain and experience value and performance from the sites and ancillary services relevant to their own specific career and personal/professional goals and desires. This article highlights how Michigan Virtual University, committed to workforce development using the World Wide Web, has begun to assemble career systems that meet many of these criteria. (GCP)

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# *Career Guidance Services at Michigan Virtual University: Linking Careers and Education through Virtual Tools—A Lifespan Career Development Model*

by
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*Chapter Eleven*

# Career Guidance Services at Michigan Virtual University: Linking Careers and Education Through Virtual Tools – A Lifespan Career Development Model

*by Paul M. Stemmer, Jr., Bruce Montgomery, & J.P. Moore*

Michigan Virtual University is committed to workforce development using the World Wide Web. We have partnered with a number of institutions to find different ways to promote career development. The most visibility related to career development is currently with job or talent banks such as Monster or Hotjobs.com. The primary function of those sites are to assist people in finding jobs. It's the perfect opportunity to make suggestions to the user to consider more elaborate career development planning. To ask the tougher questions like where am I going? Am I finding my work rewarding? Does it take advantage of my talents, interests, skills and abilities? To find out what new skills might lead me to careers more suited to me - and a plan to get there.

The cornerstone of our career systems are:

| *Functional areas* | *The questions* |
|---|---|
| Career Exploration | What kinds of jobs are there?<br>What do they pay?<br>What skills are required? |
| Assessment and Diagnostics | What skills do I have?<br>What's the gap between my skills and my desired careers?<br>What are my interests? |
| Education and Training | What kind of training and educational credentials do I need?<br>Where can I get this training or education?<br>Is it available over the Internet? |
| Job Banks and Job Hunting Skills | How do I write a résumé?<br>What are good interview techniques?<br>How do I negotiate a salary?<br>How do I find good jobs? |

These cornerstones are based on the premise that various websites can help provide information to these questions. The assumption is that clients will encounter a broad array of career options and scenarios throughout their lives. In addition to identifying the audiences, we continue to address issues of durability, functionality and usability. We continue to refine the model and address the question of how do we provide information and guidance and where does the need for professional intervention come in to play. How can we help individuals build career guidance awareness and identify when and how to find professional guidance when they need it?

We hope that by sharing our experiences we can assist other state and career-related institutions in our common goal of helping people find and manage their careers. We believe that strategic career development improves our economy.

The power of the World Wide Web has spurred tremendous growth in the number of career information sites – with a broad range in purpose, quality and effectiveness. According to Career Cross Roads(http://www.careerxroads.com) there are over 2,500 job and rÈsumÈ websites. Some of these websites (which include government sources) deliver excellent information for users seeking career information. The Employment and Training Administration (ETA) of the U.S. Department of Labor (DOL) hosts a variety of no-cost career information web sites (http://www.acinet.org/acinet/default.htm). Some other career sites of interest from the federal government are:

- The Occupational Outlook Handbook <http://www.bls.gov/oco/> (extensive occupational information but fewer occupations than ONET)

- The USDOL youth pages <http://www.dol.gov/dol/audience/aud-kidsyouth.htm> (a variety of career development links)
- The O*Net database Online <http://online.onetcenter.org> (difficult to navigate)
- The O*NET homepage <http://www.onetcenter.org> (general project information) has the Interest Profiler available for download as two PDF documents (the measure and the score sheet).

America's Career Kit has four websites that would be helpful for job information and training options.

- America's Learning Exchange <http://www.alx.org> (job training options, nationwide)
- America's Job Bank <http://www.ajb.org> (in Michigan the job bank is called the TalentBank)
- America's Career InfoNet <http://www.acinet.org> (labor market information, trends, wages, outlook)
- America's Service Locator <http://www.servicelocator.org> (coordinated job search services, connects to local labor offices)

The rate of career website growth is accelerating – calling for counselors to learn new skills to take advantage of these sites (Bloom and Walz, 2000).

Experienced Web users have learned that many sites come and go. With vast amounts of information and the fluid nature of the Web, users are often confused about sources. A librarian aptly quipped that the Web is like a library - only the books keep moving on the shelf and the titles keep changing. The Web has created a need to help users find and integrate accurate information across the vast resources of governments, schools and colleges and other sources with the added requirement to be focused on the personal needs of each user.

The state of Michigan under the direction of Governor John Engler began downsizing state government about 10 years ago. This required improved efficiency and methods for integrating and focusing various state information and services.

At the direction of the Michigan Department of Career Development (http://www.mdcd.org), director Dr. Barbara Bolin (the nation's first state cabinet level position for career development) approved a grant proposal to the Michigan Virtual University (www.mivu.org) to develop a comprehensive one-stop information kiosk web site to find and develop Michigan talent (www.talentfreeway.org). This site provides integration of career services through generic guidance about career development and a series of links to state government services and agencies. Using this site as the basis for development, Michigan Virtual University began a process of building career tools that are being integrated into a variety of career sites in MVU's career services division.

Michigan Virtual University (MVU) is developing both public information kiosks and personalized portal websites to deliver career development tools. The personalized portal provides a user experience appropriate for personal career development planning.

The MVU career guidance system

Michigan Virtual University (MVU) is a private, not-for-profit Michigan corporation established in 1998 to deliver online education and training opportunities to the Michigan workforce. MVU is divided into three major divisions: Corporate Learning Services, Education Services and Career Services.

The MVU career guidance system uses a modified version of a Lifespan Development Model (Kerka, 1992). MVU systems are based on the theory of empowerment through technology, new ideas about the meaning of careers and exploring different delivery methods (see Johnston and Benson, 2000 for a similar description). MVU has developed a series of websites to serve a variety of career development purposes. Figure One shows the career process flow of MVU sites.

Figure One. MVU Career System Process Flow

*Occupational Profiles and Exploration*

In this circle, the client is exploring occupational profiles on a variety of characteristics and matching it to their own profiles. These characteristics include the user's interests and abilities matched to the demands of a particular occupational profile (interests, values, skills required, salary range, etc.).

Website Components – The following components may be included in MVU Career Guidance websites:

- O*NETÆ career search engine. ETA provides a website for public use (www.onilne.onetcenter.org). While it is a useful site by itself, MVU has obtained the database for customized use in its sites.
- Career Biographies. The career biographies are developed by MVU and consist of about a written page's worth of information about an individual and his/her specific skills and interests and daily activities on a specific job. These are mapped to the O*NETÆ occupations. They are meant to give the user a human understanding of the specific occupation.

*Skill/Competency Assessment Tools*

Tools in this area help the user compare his or her own skills and competencies with those in the occupational profile(s) he or she selected to explore. Many formal and informal assessment tools are now being offered online. This stage concludes with a skill gap analysis to find a prescription for those areas where the client needs to increase his or her skills in order to be competitive or qualified for that job.

Website Components –

- Holland code searches mapped to O*NETÆ occupations. Many assessment instruments use the factors identified by John Holland (such as Realistic, Investigative, Artistic, Social, Enterprising, Conventional)
- ACT work keys. We have a process ongoing to map the ACT work keys profile to the O*NETÆ codes.
- Other assessment instrument mapping is being considered
- Skill Gap Analysis and Prescriptive Paths. This system provides a method for identifying the skill profile for a given job and mapping them to an analysis of the level of training required to meet the job profile skill level. Two instruments under consideration for doing this are:
  www.tipinteractive.com
  www.softskills.com

*Education & Training Packages*

Specific occupational profiles may require formal degrees or certifications. All occupations and jobs require a series of skill sets. Based on a prescription from the user's assessment results - a plan of obtaining the skills and degrees can be developed and deployed. These "packages" of education and training can be delivered through a variety of delivery systems, which increasingly include online methods.

Website Components –

- Many of our systems use a Learning Management System (LMS). The system we are using is: www.learnframe.com. There are many good ones to choose from.
- IPEDS. Integrated Post-secondary Education Data System contains over 9,000 colleges, universities and training institutions maintained by the U.S. Department of Education. Just as O*net, the site has useful information (http://nces.ed.gov/ipeds/cool/) but MVU has taken the database and customized the interface..
- EDP. An Educational Development Plan is created from program standards from the Michigan Department of Career Development. It contains a student's occupational and education and training plans.

*Job Search and Posting Match*

The successful candidate has the educational degrees and specific skills sets to enter the job market to find the job they have matched in the profile process. These job-hunting skills include job finding, rÈsumÈ writing, interviewing, and negotiating skills.

Website Components –

- Many of these job-matching systems are increasingly online (http://www.monster.com, http://www.hotjobs.com, http://www.ajb.org, and others).
- The Michigan Internships program is included in this area as well. In Michigan we link to the Michigan Talentbank (http://www.michworks.org).

The dynamic nature of the career guidance system allows users to enter and exit the system at any stage desired. Some users may know (or at least think they know) their occupational profiles and skill gaps and will elect to proceed to charting their education and training plans. Other users (apparently most) will want to proceed directly to the job searching area, but may find that they are unsure of their career goals or qualifications and can then re-enter the system at another stage. The system is designed for continuous examination and exploration over the lifespan. It also designed for use with or without a counselor or advisor, although there are advantages to the user who engages with experts at various stages of development.

**Translating the guidance system process into practical websites**

In the span of one year's time, MVU has developed six career guidance websites. These sites are specific to certain ages, professional roles and government agencies:

- **Talentfreeway** – the original site for the state of Michigan — a public, one-stop center for all ages from youth to retirees and for employees, new workers, and employers.
  This one-stop website integrates existing online state tools to enable Michigan residents to explore, plan careers and educational paths, and search for jobs. Employers can find information and access the Michigan TalentBank. There are over 75,000-100,000 unique visitors per month and over 1.5-1.9 million page images are hit each month. TalentFreeway is supported through a grant by the Michigan Department of Career Development.
  *Discussion.* We continue to find it challenging to get our one-stop agencies to take advantage of this web site. We are pleased with our first year usage patterns but we think the usage should be much higher. The most obvious advantage to the use of this site is because it is on the Web, it can be used in the one-stops and once learned, clients can use the site at libraries, Internet cafÈs and private homes. But this innovation is evolving more slowly than we would like. Some of this resistance is from:
    - counselors uncomfortable with the technology
    - counselors not fully trained
    - Internet website availability at the one-stops
    - Fear that the sites could become "too" popular, generating a dependency on the web site as well as not having enough computers

- **myDreamExplorer** – a personalized career development system for middle and high school students. The core of the system is a personal educational development plan.
  This is an online systematic approach to career development. MyDreamExplorer is a personalized portal system for middle and high school students. It is currently licensed (by a nominal fee) to 1,281 institutions such as middle schools, high schools, libraries, colleges and correctional facilities. MyDream has about 7,000-10,000 visitors per month. It includes several occupational databases, education and training databases and personal information. The core of the system is that all information can be saved in an Educational Development Plan consisting of 107 different pieces of information on each user which is totally accessible through the Internet. Site administrators can view data and reports.
  *Discussion.* Many schools take advantage and use the IPEDS and O*NET websites that are made available to the public at no charge. This website centers around the student's educational development plan and integrates exploration and educational program planning. There is great demand for training and support for this site. To maximize use for this site, counselors need to be trained and comfortable with this technology. Many schools have problems getting enough computers connected to the Internet with competing uses for computer programming and the

Michigan Virtual High School. The biggest lesson we have learned on this site in the first year is the need to simplify the site and to identify the most basic needs and deliver those services well instead of providing "too much" information. We need to work very closely with counselors to plan new features.

- **BeeFreeway** – is an information and training source for Very Small Enterprises (a business with 25 full time employees or less) in Michigan. This is the Business e-Education Freeway, which offers prepaid training and career advice for Michigan's small businesses of 25 or fewer employees. This website launched on January 22, 2002. Michigan's 715,000 small business employees can access over 1,300 online learning modules in information technology and personal management, leadership, and teamwork skills. Career advice and tools are presented for employers and employees. It is supported by a grant from the Michigan Department of Career Development.
  *Discussion.* Small businesses in Michigan don't realize that they have access to over a thousand high quality training programs. Since most small businesses have not had the resources for training, this training opportunity is not in the typical culture. Many of these businesses also don't have (or until now - didn't see) a need for an Internet connection. Given that these businesses also don't have the luxury of allowing their employees a lot of time for training, it is difficult for them to adopt this new technology. We believe through training and seminars and model projects, we will be able to attract more businesses.

- **MiInternship** – Michigan internship site is designed to be similar to a job matching profile system, only for college internships. The Michigan Internships site is a place for employers to post their internships and for Michigan college students to search, apply online and get internships. It is expected to improve the selection process across the state and benefit Michigan companies and Michigan college students. A new feature is being developed to have "smart" internships where companies will guarantee an internship to students that qualify through special training. This site is supported by the Michigan Economic Development Corporation.
  *Discussion.* Our biggest lesson we have learned is how difficult it is to collect internship data. What we have discovered is that many Michigan businesses either are comfortable with the old tried and true method of individual instructors working with specific businesses or they have their internships posted on their websites and do not want to take up an employee's time to enter the data into a foreign and common database. We are beginning to see this trend regarding the desire by these companies to resist spending resources on sending their data to a variety of sites. We are working on alternative methods to find and display this data.

- **IT Career Center** – through a grant from SBC Ameritech, MVU provides specialized career information and services focused on Information Technology. This site will provide a set of tools specialized to managing or finding a career in information technology in Michigan. The IT Career Center is a personalized portal and was launched in February, 2002. It is sponsored by SBC Ameritech.
  *Discussion.* This site is our first attempt to create a specialized career area for information technology. We are examing how to create better links between this site and our general sites, Talentfreeway and MyDreamExplorer, so that clients and students can begin to find more detailed information related to specific careers. This site focuses on certification assessment with practice tests and advice.

- **eArmyU educational advisory services** – career planning services for the new eArmyUniversity program in partnership with PricewaterhouseCoopers. MVU is providing both educational advisory services and a distance learners' orientation tool to help learners succeed in the U.S. Army's online university system. This project is in a pilot phase with three U.S. camps and is projected to reach over 80,000 Army soldiers within the next five years when it is launched worldwide.

*Discussion.* How important is it for students who are spread throughout the world and linked to potentially hundreds of college campuses to hear a consistent message about career development? This is our primary question for this web site. Can students keep their "eye on the ball," addressing the question, "Why am I getting a college education?" How much can the website do this how much assistance do the students need from counselors?

*Lessons Learned*

In this next year, we are expanding our services to college and corporate university sites. In addition we will be improving the existing sites.

*Complexity of theWeb Site and Technological Capability and Support*

There is a trade-off between more interesting websites, fancy graphics and functions and the speed at which a web site loads and the additional plug-ins required. Even with simplified websites there is a tremendous need for additional support and training to counselors (and counselor support personnel such as career development facilitators) in the area of basic technology skills and specific use and application of web-based career tools. Considerably more research is needed on how clients and counselors use career sites to improve career planning and development.

*Longevity of Web Sites and Information*

The other lesson is the long-term stability or lack thereof of web sites. As referenced at the beginning of this paper, web sites are built on electronic media and can be unplugged at a moment's notice. Sites that are sponsored by a state or federal agency are subject to the political changes of our elected leaders. Sites constructed and maintained by private companies can be sold to another company or acquired through mergers or simply discontinued, often affecting existing users' access and service. Public entities such as schools and colleges may have longer term stability but at the price of serving a limited population (their own staff, alumni, and students) with information limited to parochial career opportunities and doing so with limited and exposed budgets.

*Free vs. Fee*

There is a great debate about whether career sites should be free. MVU has free sites and fee sites. The Michigan Occupational Information System started as a National Science Foundation Grant in the late 60's. For the first 20 years the system was free. Many very good World Wide Web sites are also free to the consumer. The point is, they are not a free lunch – there are no free sites. Either advertisers or corporations are paying for your use of the web site, or the government is. There seems to be economic phenomena, though debatable, that things that are given away for free have little (or zero) value while things that are charged for are more valued. Since MyDreamExplorer is a fee-based site, there is some controversy between these two extremes. The "free" site proponents argue that this information should be freely available as we make education a free and civil right. The fee proponents argue that government sites are subject to the whims of the current legislature and their interest (and appropriations) waxes and wanes. Many of the free sites are not updated frequently and they lack a professional look. The argument for a fee-based site is that the money collected is used for training, research and development, and the consumers can vote with their feet. The market place is self-correcting. MyDreamExplorer also faces competition from other fee-based companies that have some very fine products. By requiring a fee and setting up an ongoing research and development process, MVU will be able to provide information about career development outcomes in ways that haven't been possible.

*Career and Technical Education vs. College Prep and General Education*

Educators have failed to break the artificial barrier between career and technical education and college or general education. This creates a strain on the use of the career system in high schools and colleges. While this argument is beyond the scope of this document, resolving this issue in a compatible new paradigm would greatly improve education.

*Technological Trends*

Broadband and wireless technologies are greatly changing the ease of delivering sophisticated and personalized web sites. While it is difficult to keep up, as these technologies become available, more methods

need to be incorporated into the career websites (such as video stored and live media events). There remains a dilemma for those that have not yet crossed the digital divide (http://www.digitaldividenetwork.org) in how to ensure they get good and solid information as well.

*Human Interaction and Simplification*

We continue to get better at identifying what information needs to be delivered by a human (counselor) and what information can be delivered by the Web. The best solution is an intelligent use of both. Therefore, as we build the web site training is critical – we need to identify the best practices and share those with the users. What appears to be clear is that the counselor-to-student ratio in typical Michigan schools does not allow the students enough time, exposure, and information on career planning. It is hoped that with the use of MyDreamExplorer, we will be able to optimize the counselors' time, while ensuring that all students receive adequate career preparation planning.

## Summary

The cornerstone of online career guidance systems rests with their degree of durability, functionality, usability, and applicability over time and across a broad array of career options and scenarios. Students, counselors, employers, employees, and other prospective users must ascertain and experience value and performance from the sites and ancillary services relevant to their own specific career and personal/ professional goals and desires. MVU has begun to assemble career systems that meet many of these criteria. The next step is to begin to assemble systems with built-in evidentiary measures that will allow us to evaluate the relevant effectiveness and efficiencies of such systems on the target audiences.

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